

Appl. No. 10/722,013  
Reply to Office action of 12/01/2005

further in view of Malhi et al. (U.S. Patent 5,225,697) further in view of Lee et al. (U. S. Patent 6,509,601).

Applicant respectfully submits that claim 2 is patentable over Mitani in view of Janning, Malhi and Lee as there is no disclosure or suggestion in the references of a recrystallized polysilicon layer located over a gate electrode layer and a capacitor located on the recrystallized polysilicon layer, wherein the capacitor includes a first electrode, an insulator located over the first electrode, and a second electrode located over the insulator. Mitani teaches a trench capacitor having an electrode 11, dielectric 10, and a recrystallized layer 4 serving as the other capacitor electrode. As the Examiner noted, Mitani fails to teach the recrystallized layer over a gate electrode and the claimed recrystallized polysilicon layer/first electrode.

Janning is applied by the Examiner to teach a recrystallized polysilicon layer over a gate electrode. While Janning does teach a recrystallized polysilicon layer over a gate electrode, the recrystallized layer of Janning forms the channel region (and source and drain regions) of the device. The device of Janning is a multiple gate structure having gate electrodes above and below the channel region (recrystallized polysilicon). However, Mitani uses a recrystallized polysilicon as a capacitor electrode rather than as its channel region. Janning would not suggest to one of ordinary skill in the art, modifying Mitani by placing a gate electrode below the capacitor electrode (recrystallized polysilicon) layer 4 in order to accomplish the claimed invention.

In addition, the Examiner applies Malhi to teach the required recrystallized polysilicon/capacitor electrode. The Examiner refers to column 1 and FIG. 2 of Malhi. While column 1 refers to a recrystallized polysilicon layer, such a layer is not shown in FIG. 2. The recrystallized polysilicon layer forms one electrode of the storage capacitor. So, while Malhi and Mitani teach a recrystallized polysilicon layer as a capacitor electrode, neither discloses nor suggests the claimed recrystallized polysilicon and first electrode and/or the capacitor including the first electrode and being located on the

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recrystallized polysilicon layer. Accordingly, Applicant respectfully submits that claim 2 and the claims dependent thereon are patentable over the references.

The Examiner objected to claim 4 as being dependent upon a rejected base claim. Applicant requests that the objection be withdrawn in light of the comments above directed towards claim 2 from which claim 4 depends.

In light of the above, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance/continued allowance of claims 2-5, 7-10, and 12-21. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

Respectfully submitted,



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